I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS EXPRESS MAIL IN AN ENVELOPE ADDRESSED TO: COMMISSIONER FOR PATENTS, BOARD OF PATENT APPEALS, P.O. BOX 1450, ALEXANDRIA, VIRGINIA 22313-1450, ON DATE OF DEPOSIT: August 17, 2006
EXPRESS MAIL CERTIFICATE NO: EQ611979664US
PERSON MAKING DEPOSIT: ANNE VACHON DOUGHERTY

Anne Vachon Dougherty 8/17/06
Signature & Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of	:	August 17, 2006
A. Mohindra, et al	:	Group Art No.: 2143
Serial No. 10/076,778	:	Examiner: G. Neurauter
Filed: February 13, 2002	:	for IBM Corporation Anne Vachon Dougherty 3173 Cedar Road Yorktown Heights, NY 10598
Title: METHOD AND APPARATUS FOR ENABLING LOCATION INDEPENDENT AND LOCATION TRANSPARENT INTERACTION BETWEEN PROGRAM AND USER		

Board of Patent Appeals and Interferences
Washington, D.C. 20231

AMENDED APPEAL BRIEF (37 CFR 41.37)

Appellants hereby appeal to the Board of Patent Appeals and Interferences from the decision dated August 5, 2005 of the Examiner finally rejecting Claims 11-18 and 20-22 in the

above-identified patent application, and respectfully request that the Board of Patent Appeals and Interferences consider the arguments presented herein and reverse the Examiner's rejection.

I. REAL PARTY IN INTEREST

The appeal is made on behalf of Appellants, Ajay Mohindra, Apratim Purakayastha, David Michael Shofi, and William Harold Tetzlaff as well as IBM Corporation, the assignee, as real parties in interest with respect to the subject patent application.

II. RELATED APPEALS AND INTERFERENCES

There are no pending related appeals or interferences with respect to the subject patent application.

III. STATUS OF CLAIMS

There are eleven (11) claims pending in the subject patent application, numbered 11-18 and 20-22. No claims

stand allowed. A complete copy of the claims involved in the appeal is attached hereto.

IV. STATUS OF AMENDMENTS

There are no amendments filed after final rejection for the application.

V. SUMMARY OF INVENTION

The presently-claimed invention provides a method and computer program data structure for enabling a user (602 at Fig. 6b) at a client location (102a of Fig. 6b) to provide input values to a bag buffer (302 of Fig. 6b and Fig. 3) for input to a running program after the program has begun running by prior to the program requesting those input values (page 13, lines 1-17). The method steps, as recited in Claim 11, include maintaining a bag buffer of variable/value pairs in the program (step 424 of Fig. 4 and Fig. 3), wherein user input values are substituted for program variables during program execution, receiving a communication, including input values, from the user (at

step 420), and temporarily storing the input values (step 422) in the bag buffer until those value are need by the program (step 402). Similarly, the structure (as illustrated in Fig. 3) as recited in Claim 18 comprises an output buffer (306 of Fig. 3) for storing output values to be displayed to a user; a bag buffer (304 of Fig. 3) for storing variable/value pairs for use by the program; an input buffer (308 of Fig. 3) for storing values for which user input of variables is required; and a program state buffer for storing at least the present state of the program (310 of Fig. 3).

VI. GROUNDS OF REJECTION TO BE REVIEWED

The grounds of rejection to be reviewed are:

(1) Claims 11-13 and 18-19 have been rejected under 35 USC 102(b) as anticipated by the Chess article; and

(2) Claims 14-17 and 20-22 have been rejected under 35 USC 103(a) as unpatentable over the Chess article.

VII. ARGUMENT

Claim 11

The Chess article is directed to the use of itinerant agents for mobile computing. The itinerant agents are described as "programs, dispatched from a source computer, that roam among a set of networked servers until they accomplish their task." Under the Chess teachings, an itinerant agent is initialized with a user's task and is dispatched to accomplish the task. When creating a task for the itinerant agent, the user employs a form or dialogue to input the task specification (e.g., book round-trip airline reservations between New York and Austin for departure date March 1 and return date March 5 for one person on business class). The task specification is then converted into a transaction agent program capable of executing the task. The transaction agent has the ability to migrate from place to place, accumulating information until it is able to complete its task (page 36, right column). As such, the agent may visit multiple airline sites to determine if an

airline has the information (i.e., appropriate available tickets) for the agent to complete the task.

All user input to the Chess system is provided in the task specification prior to running of the program (i.e., prior to instantiation of the transaction agent). Clearly, therefore, the Chess teachings do not anticipate a method including the steps of receiving user input values during program execution and storing the values in variable/value pairs in the bag buffer for later use by an agent in executing the program, as is expressly recited in Claims 11.

The Chess article does not specify how user input is stored. Further, the Chess article does not teach whether user input, such as user preferences, is used for program execution. Appellants disagree with the Examiner's interpretation of the Chess teachings.

With regard to the language of the method Claim 11, Appellants respectfully assert that the Chess article does not anticipate the invention as set forth in the independent claim. Claim 11 recites a method for enabling a user to provide input values as variables to a running program after said program has begun running and before the program needs the input values, wherein user input values are substituted

for program variables during program execution, comprising the steps of maintaining a bag buffer of variable/value pairs for use in executing the program in the program; receiving a communication, including input values, from the user; and temporarily storing said input values for said variables as variable/value pairs in said bag buffer.

Appellants contend that the Chess article does not teach or suggest providing input values as variables to a *running* program, wherein the user input values are substituted for variables during program execution. Chess provides all input to the itinerant agent prior to task execution, and in fact prior to instantiation of the itinerant agent. Clearly Chess does not anticipate enabling a user to provide input values to a running program.

Appellants further assert that Chess does not anticipate providing values for variables wherein the values will be substituted for variables during program execution. The cited Chess teachings simply states that the Transaction Agent is given the user's preferences (page 36, right column, last paragraph), but does not teach or suggest that those user preferences be used during task execution by the itinerant agent. While Chess says that the user's

preferences are "expressed are rules", Appellants respectfully assert that Chess does not teach that the user's preferences are used as input values for program execution. The rules may, as with the previously-cited Peckover patent, simply be used to order search results. Absent some express teachings, it cannot be maintained that Chess anticipates the claim language, which explicitly recites storing input values in variable/value pairs *for use in executing the program*.

Appellants further assert that Chess does not anticipate the claimed step of maintaining a bag buffer of variable/value pairs for use in executing the program in the program. As noted above, the Chess article does not provide any details of how user input information (e.g., the user preference information) is stored. The cited "goals and status information" from page 39, illustrated in Figure 2 of Chess, provides a vague description of an agent's structure, but clearly does not teach or suggest storing variable/value pairs in a bag buffer, wherein the user input values are to be substituted for program variables during program execution.

Appellants further assert that the Chess article does not anticipate the claimed steps of receiving a communication during program execution, including input values, from the user and temporarily storing said input values for said variables as variable/value pairs in the bag buffer. Chess has the stated intention of providing a mechanism for an itinerant agent to receive user input at agent initialization and to be dispatched without any further user input. There is nothing in the Chess article which either teaches or suggests providing user input during program execution.

Anticipation under 35 USC 102 is established only when a single prior art reference discloses each and every element of a claimed invention. See: In re Schreiber, 128 F. 3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997); In re Paulsen, 30 F. 3d 1475, 1478-1479, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994); In re Spada, 911 F. 2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990) and RCA Corp. v. Applied Digital Data Sys., Inc., 730 F. 2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). Since the Chess article does not teach the claimed method steps of maintaining a bag buffer, receiving input values from a user during program execution

and storing the input values as variable/value pairs in the bag bugger, it cannot be maintained that Claim 11 is anticipated by the Chess article.

Claim 12

Appellants rely on the arguments set forth above with regard to the method steps recited in Claim 11, from which Claim 12 depends. Claim 12 further recites "wherein said program subsequently performs a retrieving step wherein said program searches through contents of the bag buffer to locate needed input values before requesting input from said user". As discussed above, the Chess article does not teach or suggest a bag buffer and does not teach or suggest that a transaction agent interacts with the user at all during agent program execution. The user only inputs the task specifications and waits for the transaction agent to return with results after the transaction agent has completed its task. Clearly it cannot be maintained that the transaction agent of Chess searches contents of a bag buffer prior to requesting input from a user (Claim 12), since Chess has no bag buffer and does not teach or suggest interacting with (i.e., requesting information from) the user.

Claim 13

Claim 13 recites the retrieving step comprising steps of searching, in the bag buffer, for input values associated with input variables requested by said program, updating, if found, the input variables with the input values, disposing of the input variables if not found; and notifying the user via electronic means if no suitable values are found in the bag buffer. Appellants rely on the arguments set forth above with regard to the method steps recited in Claims 11 and 12, from which Claim 13 depends. Further, Appellants contend that the Chess article does not anticipate the claimed steps since Chess provides no teachings regarding a bag buffer for its user task specification, or regarding updating user task specifications, or of notifying a user if task specifications are not suitable values. Absent the claimed teachings, the Chess article cannot be said to anticipate the language of Claim 13.

Claims 18-19

With regard to the structure claims, independent Claim 18 and those claims which depend therefrom and add further limitations thereto, Appellants assert that Chess does not provide any details for storage of data. Chess does not teach or suggest an output buffer, an input buffer, a program state buffer, and a bag buffer as claimed. Appellants reiterate that Chess does not store variable/value pairs of data, which data is needed for execution of the program. The stored variable/value pairs of the present invention are provided by the user and stored for use by the program while the program is running, but prior to when the program actually needs the variables/values. There is simply nothing in the cited Chess teachings which anticipates or obviates that claim language. In rejecting the claimed output buffer, the Examiner states that a "client sends its agent...to retrieve the latest version of a technical paper...[serving] as a courier...for data and program content." Appellants fail to see how that statement anticipates the claimed output buffer for storing program execution output values to be displayed to a user.

With respect to the claimed input buffer, the Examiner has cited the Chess teaching that "the agent is initialized with the user's task" and the passage on page 35 about the task specification. However, Chess does not teach or suggest an input buffer for storing values based on user input of values for variables required by an already running program, wherein user input values are substituted for program variables during program execution, said input buffer being accessed by said agent execution shell to communicate values for the input variables to the agent for present use by the agent during program execution. All that Chess states is that the user uses a form to "state his need". Such teachings clearly do not anticipate the claimed input buffer.

With regard to the program state buffer for storing at least the present state of said program, the Examiner has cited the Chess statement that "when the agent has successfully completed its task...it may collect its state." Chess does not, however, teach a program state buffer.

Finally, with regard to the claim feature of a bag buffer for storing variable/value pairs for later use by the agent in executing the program, Appellants reiterate the

arguments presented above, that Chess does not teach how user preferences are stored, and clearly does not teach a bag buffer for storing variable/value pairs for use in executing the program. Appellants note that the Examiner cites the Chess statement that "the agent is initialized with the user's task" against the bag buffer. The Examiner has also cited the exact same language against the input buffer. Since Appellants are clearly reciting two distinct components, Appellants respectfully assert that one Chess teachings cannot anticipate two distinctly claimed components of the structure. The Examiner again cites the "goals and status information" which also does not anticipate a bag buffer for storing variable/value pairs.

It is well established under U. S. Patent Law that, for a reference to anticipate claim language under 35 USC 102, that reference must teach each and every claim feature. Since the Chess article does not teach an output buffer for storing program execution output values to be displayed to a user, does not teach an input buffer as claimed, does not teach a bag buffer for storing variable/value pairs for later use by an agent in executing the program, and does not teach a program state buffer in conjunction with input,

output and bag buffers, it cannot be maintained that the Chess article anticipates the invention as claimed in Claims 18-19.

Claims 14-17 and 20-22

Appellants further assert that the Chess article does not obviate the invention as set forth in the pending claims. Appellants rely on the arguments set forth above with regard to the language of the independent claims. Further, Appellants respectfully assert that Chess does not teach or suggest the invention as set forth in dependent Claims 14-17 and 20-22. With regard to Claims 14-17, the Examiner has acknowledged that Chess does not expressly disclose notifying with the claimed electronic means. The Examiner has failed to cite any Chess teachings against the claim language. Rather, the Examiner states that "it would have been obvious to one skilled in the art at the time the invention was made to assemble and transmit a message to an electronic means such as a pager, beeper, electronic mail, or smart telephone..." (page 10 of the Office Action). Appellants contend that obviousness cannot be maintained without some teaching or suggestion of the claim features.

The Federal Circuit has stated that when patentability turns on the question of obviousness, the obviousness determination "must be based on objective evidence of record" and that "this precedent has been reinforced in myriad decisions, and cannot be dispensed with." (In re Lee, 277 F. 3d 1338, 1343 (Fed. Cir. 2002)). Moreover, the Federal Circuit has stated that "conclusory statements" by an examiner fail to adequately address the factual question of motivation, which is material to patentability and cannot be resolved "on subjective belief and unknown authority" (Id. at 1343-1344).

Appellants further maintain that it would not be obvious to provide the claimed notifying in conjunction with the additionally recited claim features of maintaining the bag buffer, receiving a communication, temporarily storing the input values, searching the bag buffer, and updating variables and/or disposing of input values. Clearly, therefore, Chess does not teach or suggest the invention as set forth in Claims 14-17. Appellants respectfully request reconsideration of the rejections of these claims.

With regard to Claims 20-22, Appellants disagree with the Examiner's conclusion that the claim language is

obvious. Again the rejection has been made without any citation of teachings from the Chess article. Chess simply illustrates, at Figure 2, a sequence of blocks. Chess does not teach or suggest an array data structure, a hash table data structure, or a tuple space data structure, as recited in the language of Claims 20-22. For a determination of obviousness, the prior art must teach or suggest all of the claim limitations. "All words in a claim must be considered in judging the patentability of that claim against the prior art" (*In re Wilson,* 424 F. 2d 1382, 1385, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). If the cited references fail to teach each and every one of the claim limitations, a *prima facie* case of obviousness has not been established by the Examiner.

CONCLUSION

Appellants respectfully assert that the Examiner has erred in rejecting Claims 11-13 and 18-19 under 35 USC 102(b) as anticipated by the Chess article and has erred in rejecting Claims 14-17 and 20-22 as unpatentable over the teachings of the Chess article. Appellants request that the decision of the Examiner, rejecting all of the pending claims, be overturned by the Board and that the claims be passed to issuance.

Respectfully submitted,
A. Mohindra, et al

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APPENDIX OF CLAIMS

1-10 (canceled)

11. A method for enabling a user to provide input values as variables to a running program after said program has begun running and before the program needs the input values, wherein user input values are substituted for program variables during program execution, comprising the steps of:

maintaining a bag buffer of variable/value pairs for use in executing the program in the program;

receiving a communication, including input values, from the user during program execution; and

temporarily storing said input values for said variables as variable/value pairs in said bag buffer.

12. The method of Claim 11 wherein said program subsequently performs a retrieving step wherein said program searches through contents of the bag buffer to locate needed input values before requesting input from said user.

13. The method of Claim 12 wherein the retrieving step comprises the steps of:

searching, in the bag buffer, for input values associated with input variables requested by said program;

updating, if found, the input variables with the input values;

disposing, in an input buffer, the input variables, if not found; and

optionally notifying the user via electronic means if no suitable values are found in the bag buffer.

14. The method of Claim 13 wherein the electronic means is a pager and wherein said notifying comprises assembling and transmitting a page message to said user.

15. The method of Claim 13 wherein the electronic means is a beeper and wherein said notifying comprises assembling and transmitting a message to the beeper of said user.

16. The method of Claim 13 wherein the electronic means is electronic mail and wherein said notifying

comprises assembling and transmitting a electronic mail message to said user.

17. The method of Claim 13 wherein the electronic means is a smart telephone and wherein said notifying comprises assembling and transmitting a message to the smart telephone of said user.

18. A computer program data structure for a mobile agent executing a program at an agent execution shell at a computing location comprising:

an output buffer for storing program execution output values to be displayed to a user;

an input buffer for storing values based on user input of values for variables required by said program, wherein user input values are substituted for program variables during program execution, said input buffer being accessed by said agent execution shell to communicate values for the input variables to the agent for present use by the agent during program execution;

a program state buffer for storing at least the present state of said program; and

a bag buffer for storing variable/value pairs for later use by said agent in executing said program.

19. (canceled)

20. The data structure of Claim 18 wherein the bag buffer is an array data structure.

21. The data structure of Claim 18 wherein the bag buffer is a hash table data structure.

22. The data structure of Claim 18 wherein the bag buffer is a tuple space data structure.

23-24 (withdrawn)

EVIDENCE APPENDIX

There has been no additional evidence presented.

RELATED PROCEEDINGS APPENDIX

There are no related proceedings.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **A. Mohindra, et al**

Express Mail: EQ 611979664US
Date: August 17, 2006

Serial No.: **10/076,778**

Filed: **February 13, 2002**

Docket No.: **YO998-210X**

COMMISSIONER FOR PATENTS
Alexandria, VA 22313-1450

Sir:

In response to the ***Notification of Non-Compliant Appeal Brief*** dated July 17, 2006, Appellants transmit herewith an **Amended Appeal Brief** in the above-identified Application. The reply with new Appeal Brief is being filed within the period for response which is scheduled to expire on August 17, 2006.

No fee is believed due for submission of the new Appeal Brief. Should any fee be due as required under 37 CFR 1.16 or 1.17, the Commissioner is hereby authorized to charge payment of fees associated with this communication or credit any overpayment to **Deposit Account No. 50-0510.**

Respectfully submitted,
A. Mohindra, et al

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UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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7590 07/17/2006

EXAMINER	

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ART UNIT	PAPER NUMBER

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Notification of Non-Compliant Appeal Brief (37 CFR 41.37)	Application No. 10/076,778	Applicant(s) MOHINDRA ET AL.	
	Examiner George C. Neurauter, Jr.	Art Unit 2143	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The Appeal Brief filed on *05 June 2006* is defective for failure to comply with one or more provisions of 37 CFR 41.37.

To avoid dismissal of the appeal, applicant must file anamended brief or other appropriate correction (see MPEP 1205.03) within **ONE MONTH or THIRTY DAYS** from the mailing date of this Notification, whichever is longer. **EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136.**

1. ☐ The brief does not contain the items required under 37 CFR 41.37(c), or the items are not under the proper heading or in the proper order.

2. ☐ The brief does not contain a statement of the status of all claims, (e.g., rejected, allowed, withdrawn, objected to, canceled), or does not identify the appealed claims (37 CFR 41.37(c)(1)(iii)).

3. ☐ At least one amendment has been filed subsequent to the final rejection, and the brief does not contain a statement of the status of each such amendment (37 CFR 41.37(c)(1)(iv)).

4. ☐ (a) The brief does not contain a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings, if any, by reference characters; and/or (b) the brief fails to: (1) identify, for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function under 35 U.S.C. 112, sixth paragraph, and/or (2) set forth the structure, material, or acts described in the specification as corresponding to each claimed function with reference to the specification by page and line number, and to the drawings, if any, by reference characters (37 CFR 41.37(c)(1)(v)).

5. ☐ The brief does not contain a concise statement of each ground of rejection presented for review (37 CFR 41.37(c)(1)(vi))

6. ☐ The brief does not present an argument under a separate heading for each ground of rejection on appeal (37 CFR 41.37(c)(1)(vii)).

7. ☐ The brief does not contain a correct copy of the appealed claims as an appendix thereto (37 CFR 41.37(c)(1)(viii)).

8. ☐ The brief does not contain copies of the evidence submitted under 37 CFR 1.130, 1.131, or 1.132 or of any other evidence entered by the examiner **and relied upon by appellant in the appeal**, along with a statement setting forth where in the record that evidence was entered by the examiner, as an appendix thereto (37 CFR 41.37(c)(1)(ix)).

9. ☐ The brief does not contain copies of the decisions rendered by a court or the Board in the proceeding identified in the Related Appeals and Interferences section of the brief as an appendix thereto (37 CFR 41.37(c)(1)(x)).

10. ☒ Other (including any explanation in support of the above items):

The brief does not name the real party in interest, particularly the assignee. SEE MPEP 1205.02 ("The specific items required by 37 CFR 41.37(c)(1) are:
(i) Real party in interest. A statement identifying by name the real party in interest even if the party named in the caption of the brief is the real party in interest. If appellant does not name the real party in interest under this heading, the Office will notify appellant of the defect in the brief and give appellant a time period within which to file an amended brief. See 37 CFR 41.37(d). If the appellant fails to correct the defect in the real party in interest section of the brief within the time period set forth in the notice, the appeal will stand dismissed.

The identification of the real party in interest allows members of the Board to comply with ethics regulations associated with working in matters in which the member has a financial interest to avoid any potential conflict of interest. When an application is assigned to a subsidiary corporation, the real party in interest is both the assignee and either the parent corporation or corporations, in the case of joint ventures. One example of a statement identifying the real party in interest is: The real party in interest is XXXX corporation, the assignee of record, which is a subsidiary of a joint venture between YYYY corporation and ZZZZ corporation").

U.S. Patent and Trademark Office
PTOL-462 (Rev. 7-05) Notification of Non-Compliant Appeal Brief (37 CFR 41.37) Part of Paper No. 20060630

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